

# Work Order ID 120085

Wednesday, June 04, 2014 2:55:26 PM

**\*120085\***

Page 1

Item ID: D2500-1-190 Accept **\*N9000040100\*** Setup Start **\*NS1\***  
 Revision ID: Stop **\*NS2\***  
 Item Name: Ext'n - I' Beam Tube 4" 90  
 Start Date: 6/04/14 Start Qty: 80.00 **\*80\*** Cust Item ID:  
 Required Date: 7/31/14 Req'd Qty: 80.00 **\*80\*** Customer:  
 Reference:

Approvals: Process Plan: MLS Date: 14-06-05 Tooling: \_\_\_\_\_ Date: \_\_\_\_\_  
 QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_  
 Run Start **\*NR1\***  
 Stop **\*NR2\***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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Draw Nbr	Revision Nbr
D2500	Rev H

100 0.00

**\*100\***

Purchasing

Purchasing

PURCHASING

Memo

Issue P/O: 24528

- a) Extrude as per Dwg D2500
- b) Material: 6061-T6 (QQ-A-200/8)
- c) Minimum yield tensile strength = 35 ksi
- d) Minimum ultimate tensile strength = 38 ksi
- e) Minimum elongation = 8%
- f) Order at 190" long
- g) Bon L Canada Inc. tool # 897105
- h) To be packed per DSK 066
- i) Pull test to ASTM standard B221 required.
- j) Material certification is required

0.00

CL 14/ae110 90

110 0.00

**\*110\***

Packaging

Packaging

Receive & Inspect for Damage & Mat'l Certs

Memo

Ensure material certification is attached

0.00

Pg 1/8 (92)

DQA: \_\_\_\_\_ Date: \_\_\_\_\_



## WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

Work Order update only ☐

Work Order: _____  Part No. _____  NCR No. _____	<b>DISPOSITION</b>  Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Suspected Unapproved <input type="checkbox"/>	<b>AGAINST DEPARTMENT/PROCESS</b>  <table style="width: 100%;"> <tr> <td>Skid-tube <input type="checkbox"/></td> <td>Crosstube <input type="checkbox"/></td> <td>Water Jet <input type="checkbox"/></td> <td>Engineering <input type="checkbox"/></td> </tr> <tr> <td>Machining <input type="checkbox"/></td> <td>Small Fab <input type="checkbox"/></td> <td>Prod. Eng. Coord. <input type="checkbox"/></td> <td>Quality <input type="checkbox"/></td> </tr> <tr> <td>Thermoforming <input type="checkbox"/></td> <td>Finishing <input type="checkbox"/></td> <td>Rec/Store/Packaging <input type="checkbox"/></td> <td>Other <input type="checkbox"/></td> </tr> <tr> <td>Large Fab <input type="checkbox"/></td> <td>Composite <input type="checkbox"/></td> <td>Supplier <input type="checkbox"/></td> <td></td> </tr> </table>	Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>	Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coord. <input type="checkbox"/>	Quality <input type="checkbox"/>	Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>	Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>	
Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>															
Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coord. <input type="checkbox"/>	Quality <input type="checkbox"/>															
Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>															
Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>																

Root Cause	Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design									
Doc/Data									
Equip/Tooling									
Handling/Pre									
Material									
Operator									
Offset/Setup									
Process									
Supplier									
Training									
Transport									
Unapproved									

### FAULT CATEGORY

<b>Landing Gear</b> <input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric <input type="checkbox"/> Cracks <input type="checkbox"/> Crimp/Kink/Ripple/Wave <input type="checkbox"/> Cuffs <input type="checkbox"/> Crushing <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Marks/Chatter <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube	<b>General</b> <input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damage/Defect <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drawing <input type="checkbox"/> Drill Holes <input type="checkbox"/> Finish <input type="checkbox"/> Fit/Function	<input type="checkbox"/> Folio/Program <input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete/Unqualified <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Misaligned/off center <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Off-set <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence	<input type="checkbox"/> Outside Dimensions <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge  <input type="checkbox"/> Pressure/Forced Set-up <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled <input type="checkbox"/> Other
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# Work Order ID 120085

\*120085\*

Page 2

Wednesday, June 04, 2014 2:55:26 PM

Item ID: D2500-1-190

Accept

\*N900040100\*

Setup Start

\*NS1\*

Revision ID:

Stop

\*NS2\*

Item Name: Ext'n - I Beam Tube 4"

Start Date: 6/04/14 Start Qty: 80.00

\*80\*

Cust Item ID:

Required Date: 7/31/14 Req'd Qty: 80.00

\*80\*

Customer:

Reference:

Run Start

\*NR1\*

Approvals:

Process Plan:

Date:

Tooling:

Date:

Stop

\*NR2\*

QC:

Date:

SPC (Y/N):

Date:

Sequence ID/  
Work Center ID

Operation  
Description

Set Up/  
Run Hours

Tool ID

Tool #

Plan  
Code

Accept  
Qty

Reject  
Qty

Reject  
Number

Insp.  
Stamp

120

QC6- Inspect dimensions to drawing

0.00

DAS

27

9-89

\*120\*

QC

Memo

0.00

Quality Control

Check Pull test per Dwg D2500 for compliance page attached. Check hardness with Webster tester

130

Identify as per dwg & Stock Location: L/G

0.00

\*130\*

Packaging

Memo

0.00

Packaging

140

QC21- Final Inspection - Work Order Release

0.00

\*140\*

QC

Memo

0.00

Quality Control

92  
Clen

92 DGC 14-7-9

MLJ 14-07-09

14-7-9

DQA: \_\_\_\_\_ Date: \_\_\_\_\_

**WORK ORDER NON-CONFORMANCE / UPDATE**

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

Work Order update only ☐

Work Order: _____  Part No. _____  NCR No. _____	<b>DISPOSITION</b>  Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Suspected Unapproved <input type="checkbox"/>	<b>AGAINST DEPARTMENT/PROCESS</b>  <table style="width: 100%;"> <tr> <td>Skid-tube <input type="checkbox"/></td> <td>Crosstube <input type="checkbox"/></td> <td>Water Jet <input type="checkbox"/></td> <td>Engineering <input type="checkbox"/></td> </tr> <tr> <td>Machining <input type="checkbox"/></td> <td>Small Fab <input type="checkbox"/></td> <td>Prod. Eng. Coord. <input type="checkbox"/></td> <td>Quality <input type="checkbox"/></td> </tr> <tr> <td>Thermoforming <input type="checkbox"/></td> <td>Finishing <input type="checkbox"/></td> <td>Rec/Store/Packaging <input type="checkbox"/></td> <td>Other <input type="checkbox"/></td> </tr> <tr> <td>Large Fab <input type="checkbox"/></td> <td>Composite <input type="checkbox"/></td> <td>Supplier <input type="checkbox"/></td> <td></td> </tr> </table>	Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>	Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coord. <input type="checkbox"/>	Quality <input type="checkbox"/>	Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>	Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>	
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**FAULT CATEGORY**

<b>Landing Gear</b> <input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric <input type="checkbox"/> Cracks <input type="checkbox"/> Crimp/Kink/Ripple/Wave <input type="checkbox"/> Cuffs <input type="checkbox"/> Crushing <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Marks/Chatter <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube	<b>General</b> <input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damage/Defect <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drawing <input type="checkbox"/> Drill Holes <input type="checkbox"/> Finish <input type="checkbox"/> Fit/Function	<input type="checkbox"/> Folio/Program <input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete/Unqualified <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Misaligned/off center <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Off-set <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence	<input type="checkbox"/> Outside Dimensions <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge  <input type="checkbox"/> Pressure/Forced <input type="checkbox"/> Set-up <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled  <input type="checkbox"/> Other
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# SPECIFICATION CONTROL DRAWING

## D2500-1-XXX EXTRUSION & D2500-3-XXX EXTRUSION

### NOTES:

1) MATERIAL: 6061-T6 ALUMINUM PER QQ-A-200/8 OR AMS-QQ-A-200/8 OR ASTM B221

MINIMUM TENSILE YIELD STRENGTH = 35 KSI  
MINIMUM ULTIMATE TENSILE STRENGTH = 38 KSI  
MINIMUM ELONGATION = 8%

A SAMPLE FROM EACH BATCH WILL BE PULL TESTED TO ASTM STANDARD B221 BY AN APPROVED TESTING FACILITY TO ENSURE THAT THE BATCH MEETS THE ABOVE MINIMUM MECHANICAL PROPERTIES

2) FINISH: N/A

3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED

4) UNITS: INCHES UNLESS OTHERWISE NOTED

5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX

6) IDENTIFICATION: IDENTIFY WITH DART B/N USING FINE POINT PERMANENT INK MARKER

7) WEIGHT: D2500-1 = 0.143 lb/in, D2500-3 = 0.066 lb/in

8) FOR D2500-1 PART NUMBER IS D2500-1-XXX WHERE XXX IS CUT LENGTH (EX. D2500-1-190 IS 190" LONG). D2500-1 EXTRUSION MANUFACTURED FROM:

- A) BON L DIE # 897105 -> PREFERRED
- B) CARADON MIDEAST DIE # PAH-28030
- C) CARADON MTL DIE # MH-18868

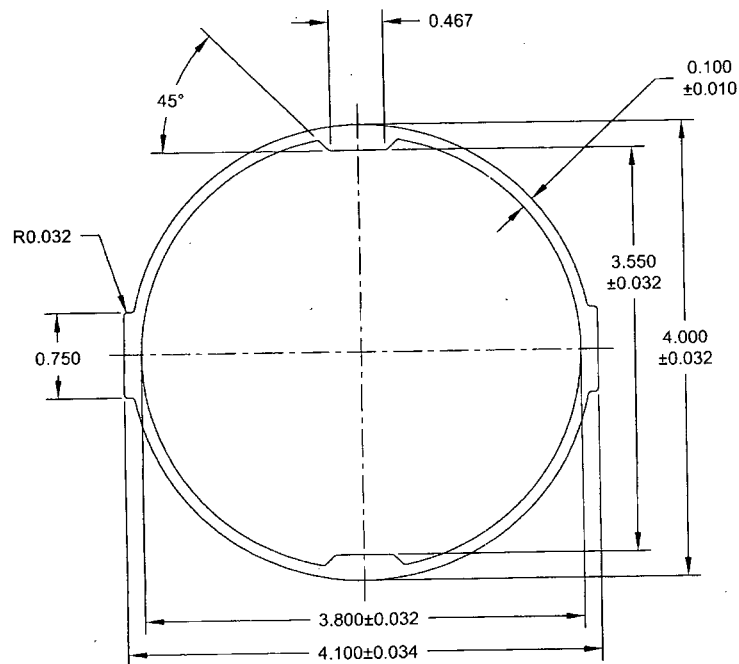
9) FOR D2500-3, PART NUMBER IS D2500-3-XXX WHERE XXX IS CUT LENGTH IN INCHES (EX. D2500-3-100 IS 100" LONG). D2500-3 EXTRUSION MANUFACTURED FROM:

- A) CARADON INDALOX DIE # MS-18867

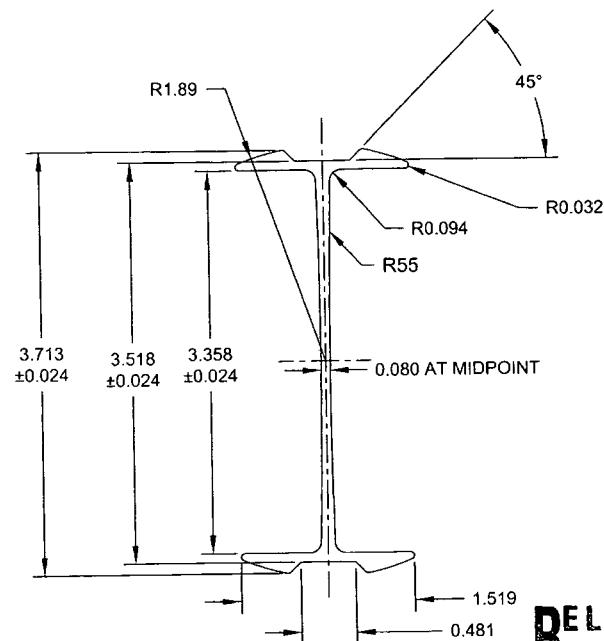
120085 MJS  
1486-05

RELEASED  
2010-02-03  
MT

H	REDRAW & REFORMAT DWG; CORRECT BON L DIE # # TYPO (ZN B8-1), ADD AMS & ASTM MAT'L OPTION (ZN D8-1), TOLERANCES NOW PER CARADON DWG (SHT 2)	CP	09.07.16
G	ADD DIE NUMBERS & 'DIMS IN INCHES' NOTES	PH	07.04.17
F	CHANGE MAT. TO 6061-T6	DS	97.09.29
E	CHANGE MATERIAL TEMPER	DS	96.10.24
D	ADD MATERIAL PROPERTIES	DS	96.10.07
C	ADD D2500-3 WEB	BW	96.04.26
B	CHANGE INTERNAL WEB	DS	96.03.24
A	NEW ISSUE	DS	96.03.19
REV.	DESCRIPTION	BY	DATE
DESIGN	<i>[Signature]</i>	<b>DART AEROSPACE LTD</b> HAWKESBURY, ONTARIO, CANADA	
DRAWN	<i>[Signature]</i>		
CHECKED	<i>[Signature]</i>		
MFG. APPR.	<i>[Signature]</i>		
APPROVED	<i>[Signature]</i>		
DE APPR.	<i>[Signature]</i>		
DATE	09.07.16	DRAWING NO. D2500	REV. H SHEET 1 OF 2
		TITLE EXTRUSION	SCALE NTS
COPYRIGHT © 1996 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.			



**D2500-1**



**D2500-3**

**RELEASED**  
2010-02-02  
MJP

DESIGN	4	<b>DART AEROSPACE LTD</b>	
DRAWN	9	HAWKESBURY, ONTARIO, CANADA	
CHECKED	PA	DRAWING NO.	REV. H
MFG. APPR.	N	D2500	SHEET 2 OF 2
APPROVED	MA	TITLE	SCALE
DE APPR.	#	EXTRUSION	NTS
DATE	09.07.16	<small>COPYRIGHT © 1996 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL. AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.</small>	



Dart Aerospace Ltd.  
1270 Aberdeen Street  
Hawkesbury, ON K6A 1K7  
Tel: 613 632 9577  
Fax: 613 632 1053

## PURCHASE ORDER

Purchase Order ID PO24528

Purchase Order Date 6/10/2014

PO Print Date 6/10/2014

Page Number 1 of 2

**Order From :**

VC-BON001

SIGNATURE ALUMINUM CANADA INC.  
C/O/ T10322C  
P.O. BOX 4488, STN A  
TORONTO, ON M5W 4H1  
CA

**Ship To :** DART AEROSPACE LTD  
1270 ABERDEEN  
HAWKESBURY, ON K6A 1K7  
CANADA

**FAXED**

**Contact Name**

**Vendor Phone**

905-427-6550

**Ship To Contact**

**Ship To Phone**

**Ship Via:**

Yours ppd

**Ship Acct:**

**Buyer**

Chantal Lavoie

**Customer POID**

**Customer Tax #**

10127-2607

**Terms**

Net 30

**Currency**

CAD

**FOB**

Destination-Collect

Line Nbr	Reference Vendor Part Number Line Comments Delivery Comments	Description/ Mfg ID	Req Date/ Taxable Promise Date	CD	Req Qty/ Unit of Measure	PO Unit Price	Extended Price
1	D2500-1-190P	Ext'N -I' Beam Tube 4"	7/7/2014 Yes 7/7/2014		90.00 Each	\$84.29	\$7,586.41
EXTRUDE AS PER DWG D2500 REV. H B120085							
EXTREME CARE MUST BE TAKEN TO PROTECT THE OUTSIDE SURFACE OF TUBE MATERIAL MUST BE SMOOTH AND FREE FROM DEFECT SCRATCHES,NICKS,DENTS							
<b>Line Total:</b>							<b>\$7,586.41</b>
2	71401-45	PROCUREMENT QUALITY CLAUSES	7/7/2014 No 7/7/2014		1.00	\$0.00	\$0.00
Procurement Quality Clauses A005 right of entry A012 chemical and physical test report A016 personnel qualification A017 raw material identification (as applicable) A026 certification of material conformance A041 quality management system A042 dart notification by supplier A043 retention of quality documents							

**Note:**

6/10/2014



1850 Clements Road, Pickering Ontario, Canada L1W 3R8

Phone: (866) 587-5780 Fax: (905) 427-2207

Visit us at [www.signaturealum.com](http://www.signaturealum.com)

INVOICING AND COMPANY LOCATION

SIGNATURE ALUMINUM CANADA

1850 CLEMENTS ROAD

PICKERING ON L1W 3R8

PACKING LIST

ACCT# 46024

SHIP TO / EXPÉDIÉ À DART AEROSPACE LTD. 1270 ABERDEEN ST. HAWKESBURY, ON K6A 1K7 CANADA  PHONE: 613-632-5200				SOLD TO / VENDUE À DART AEROSPACE LTD. 1270 ABERDEEN ST. HAWKESBURY, ON K6A 1K7 CANADA  PHONE: 613-632-5200				TERMS / FREIGHT  PP		REFER TO THESE NUMBERS ON ALL CORRESPONDANCE  REFEREZ-VOUS A CES NUMEROUS POUR TOUTE CORRESPONDANCE		PACKING LIST DATE / DATE DU BODEREA 07-07-14	
CUSTOMER ID / ID DU CLIENT 46024		ORDER DATE / DE LA COM 06/10/14		CUSTOMER PO NUMBER / CLIENT PO Nombre PO24528				JOB / FICHIER		FIELD SALES REP / REP REGIONAL DES VENTES G.ATTENBOROU		SALES REP / REP. DES VENTES R. BLAIS	
BILL OF LADING NUMBER / NO. DE CONNAISSEMENT 015854				CARRIER / TRANSPORTEUR WILRIDE				SALES MAN / VENDEUR 042		CREDIT REP / REP DU CRÉDIT		CUST SERVICE REP / REP. SERVICE CLIENTELE D1B	
ITEM NO. / NUMÉRO	ORIGINAL ORDER QUANTITY / Quantité d'ordre ORIGINAL	UNIT / UNITÉ	PREVIOUS SHIPPED QUANTITY / PRÉCÉDENT Quantité livrée	MFG. PART NUMBER / MFG. PARTIE NUMÉRO	ALLOY & TEMPER / ALLIAGE & TEMPER	FINISH DESCRIPTION / DESCRIPTION DE FINITION	NBR OF PKGS / NBR DE PKGS	GROSS LBS / LIVRES BRUT	NET QUANTITY / QUANTITÉ NETTE	UNIT / UNITÉ	QUANTITY DUE / Quantité en raison		
001	2,413 LB			DAA-897105-2	6061 T6		4	2,443	2,372	LB			
	1,094 KG			D2500-1-190	190.0000 IN			1,108	1,076	KG			
	90 PC				Cut(+): 0.1180 Cut(-): 0.0000	Min: -10 % Max: 10 %			92	PC			
						837118 / 218955	1	611	593		23 PC		
						837118 / 218956	1	611	593		23 PC		
						837118 / 218957	1	611	593		23 PC		
						837118 / 218958	1	611	593		23 PC		

Transportation/Traffic damages and/or shortage claims are to be noted on the delivery copy of sellers shipping packing lists and signed and dated below by customers authorized representatives.  
No return materials will be accepted for credit without permission. The articles and/or services covered by this shipping packing list were produced in accordance with the fair labor standards act of 1938 as amended. Order accepted subject to the terms and conditions stated on the reverse side.

CUSTOMER ACKNOWLEDGEMENT OF GOODS DELIVERED AND CONDITION

Page 1

DATE OF DELIVERY

DRIVER

4	2,443	2,372	LB
	1,108	1,076	KG
		92	PC
TOTALS			



**SIGNATURE ALUMINUM CANADA**1850 CLEMENTS RD  
PICKERING, ON L1W 3R8**CERTIFICATE OF COMPLIANCE**

Cert Date	Cert No.	Sales Order	Page
07/07/2014	5331523	114678	1
Cust PO	B/L No.	Lot	Date
PO24528	015854	837118	07/07/14

Sold To	Ship To
46024 DART AEROSPACE LTD. 1270 ABERDEEN ST. HAWKESBURY, ON K6A 1K7 CANADA	46024 DART AEROSPACE LTD. 1270 ABERDEEN ST. HAWKESBURY, ON K6A 1K7 CANADA

Item No	Part No	Item Description	Cust Part
001	DAA-897105-2	190" Mill 6061 T6	D2500-1-190
Gross Weight	2,443 LBS		
Net Qty	2,372 LBS	92 PCS	4 PKGS
Specification	AMS QQA 200/9 + ASTM B221-08		
	Die Desc		

**Mechanical Tests:**

Tensile	Yield			
<u>MPA / KSI</u>	<u>MPA / KSI</u>	<u>% Elongation</u>	<u>Conductivity</u>	<u>HRE</u>
302.8 / 43.9	268.3 / 38.9	9.7	N/A	92

**Chemical Analysis:**

<u>SI</u>	<u>FE</u>	<u>CU</u>	<u>MN</u>	<u>MG</u>	<u>CR</u>	<u>ZN</u>	<u>TI</u>	<u>V</u>
0.62	0.22	0.19	0.05	0.85	0.06	0.01	0.02	0.01

*This Material is RoHS Compliant*

This will certify that the material described herein has been inspected and tested in accordance with Signature Aluminum Canada's standard sampling and testing procedures or in accordance with the requirements of any specification forming a part of the material description to the extent indicated herein. Data of chemical composition for the material and test results from samples representative of the material are set forth above hereof or in any attachments hereto. This information shows that the material meets the applicable requirements. Inspection and test records are maintained on file. This certificate shall be deemed apart of and subject to the terms and conditions of warranty set forth on the reverse side of our order acknowledgement form. No other warranties are applicable.

S. Mazzotta  
Director of Quality  
Signature Aluminum Canada Inc

ISO 9001/TS16949 Registered Company

Visit us at [www.signaturealum.com](http://www.signaturealum.com)



# MATERIAL RECEIPT INSPECTION FORM

MATERIAL: D2600-1-190  
 DATE: July 9-2014

PO / BATCH NO.: 24528

MATERIAL CERT REC'D: Yes  
 QUANTITY RECEIVED: 90  
 QUANTITY INSPECTED: 90  
 QUANTITY REJECTED: 0

THICKNESS ORDERED: 0.100  
 THICKNESS RECEIVED: See attache  
 SHEET SIZE ORDERED: 190"  
 SHEET SIZE RECEIVED: 190"

DESCRIPTION	NCR (Check Y/N)		COMMENTS
SURFACE DAMAGE	Y	<input checked="" type="radio"/>	
CORRECT FINISH	<input checked="" type="radio"/>	N	
CORROSION	Y	<input checked="" type="radio"/>	
CORRECT GRAIN DIRECTION	<input checked="" type="radio"/>	N	
CORRECT MATERIAL	<input checked="" type="radio"/>	N	
CORRECT THICKNESS	<input checked="" type="radio"/>	N	
PHOTO REQUIRED	Y	<input checked="" type="radio"/>	
CORRECT MATERIAL	<input checked="" type="radio"/>	N	831118 H#
CORRECT REF # TO LINK CERT	<input checked="" type="radio"/>	N	ASTM-A291-08
CORRECT MATERIAL IDENTIFICATION	<input checked="" type="radio"/>	N	B120085
CORRECT M# ON THE MATERIAL	<input checked="" type="radio"/>	N	
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	Y	<input checked="" type="radio"/>	
DOES THIS REQUIRE AN EXTRUSION REPORT	Y	<input checked="" type="radio"/>	

CUT SAMPLE PIECE OF MATERIAL AND PREFORM A HARDNESS CHECK. RECORD RESULTS BELOW					
TYPE OF MATERIAL SIZE OF TEST SAMPLE HARDNESS / DUROMETER READING	HRC	HRB	DUR A	DUR D	

*testers located in the Quality Office*

<b>QC18 INSPECTION</b>		<b>ENGINEERING SIGNOFF (if required)</b>	
INSPECTED BY: <u>27</u> DATE: <u>14/7/14</u>	SIGNED OFF BY: _____ DATE: _____		

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in

# **MATERIAL RECEIPT INSPECTION FORM**

## **INSTRUCTIONS FOR INSPECTING BAR, TUBING, ROUND, & SHEET STOCK**

- 1- VERIFY STOCK TO DART PURCHASE ORDER
- 2- MEASURE ALL DIMENSIONS FOR EACH PURCHASED STOCK
  - a. WIDTH, THICKNESS, DIAMETER, WALL THICKNESS & LENGTH
- 3- VERIFY CONDITION OF MATERIAL i.e. DAMAGED, CORRODED, etc.
- 4- VERIFY THAT SUPPLIER HAS A NUMBER (HEAT #) ON ITS RECEIVING REPORT TO LINK TO MATERIAL CERTS
- 5- VERIFY MATERIAL CERTS ARE CORRECT TO THE DART PO INSTRUCTIONS
- 6- REMOVE / CUT A PIECE OF MATERIAL FOR SAMPLE HARDNESS TESTING

## **INSTRUCTIONS FOR INSPECTING SKIDTUBE & STEP EXTRUSION**

- 1- VERIFY TO DART SUPPLIED DRAWING
- 2- SAMPLE INSPECT MATERIAL IN BUNDLE TO ENSURE MATERIAL CAN BE RECEIVED INTO DART
- 3- USING PORTABLE HARDNESS TESTER VERIFY HARDNESS OF THE MATERIAL TO THE DRAWING
- 4- VERIFY THAT MATERIAL CERTS MATCH TO WHATS CALLED UP ON THE DART DRAWING

### **AFTER MATERIAL PASSES INSPECTION**

- 5- HAVE DART EMPLOYEES START STOCKING MATERIAL BUT REQUEST MIN **20pcs** FOR FULL INSPECTION
- 6- INSPECT ALL DIMS AS PER DRAWING REQUIREMENTS

## **INSTRUCTIONS FOR INSPECTING CROSS TUBE MATERIAL**

- 1- VERIFY MATERIAL CERTS MATCH THE REQUIREMENTS ON THE DART DRAWINGS
- 2- INSPECT MIN. HALF THE BATCH OF EXTRUSION RECEIVED INTO DART
- 3- INSPECT MATERIAL AS PER THE EXTRUSION REPORT
  - a. WALL THICKNESS USING ULTRA-SONIC IN 4 LOCATIONS
  - b. OUTSIDE DIAMETER HIGHEST/LOWEST BOTH ENDS
  - c. INSIDE DIAMETER HIGHEST/LOWEST BOTH ENDS
  - d. STRAIGHTNESS @ CENTER OVER 12" SPAN
  - e. WALL THICKNESS USING TUBE MICROMETER HIGHEST/LOWEST BOTH ENDS
- 4- IDENTIFY EACH TUBE IN SEQUENCE OF INSPECTING (TUBE 1, TUBE2.....) AND W/O# AND PO#
- 5- RECORD ALL FINDINGS ON EXTRUSION REPORT

IF ANY QUESTIONS PLEASE SEE QC COORDINATOR BEFORE GOING FURTHER